

118TH CONGRESS  
1ST SESSION

**S.** \_\_\_\_\_

To amend the Food Security Act of 1985 to authorize the Secretary of Agriculture to improve agricultural productivity, profitability, resilience, and ecological outcomes through modernized data infrastructure and analysis, and for other purposes.

---

IN THE SENATE OF THE UNITED STATES

---

Ms. KLOBUCHAR (for herself and Mr. THUNE) introduced the following bill;  
which was read twice and referred to the Committee on

---



---

**A BILL**

To amend the Food Security Act of 1985 to authorize the Secretary of Agriculture to improve agricultural productivity, profitability, resilience, and ecological outcomes through modernized data infrastructure and analysis, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Agriculture Innovation  
5 Act of 2023”.

1   **SEC. 2. DATA ON CONSERVATION AND OTHER PRODUCTION**  
2                   **PRACTICES.**

3           Subtitle E of title XII of the Food Security Act of  
4   1985 (16 U.S.C. 3841 et seq.) is amended by adding at  
5   the end the following:

6   **“SEC. 1248. DATA ON CONSERVATION AND OTHER PRODUC-**  
7                   **TION PRACTICES.**

8           “(a) PURPOSE.—The purpose of this section is to im-  
9   prove conservation outcomes, increase agricultural produc-  
10   tivity and resilience, and accelerate the development of  
11   carbon and other ecosystem service markets by collecting,  
12   analyzing, and providing data—

13           “(1) to better understand how covered con-  
14   servation practices and suites of covered conserva-  
15   tion practices and other production practices impact  
16   farm, ranch, and other working land productivity  
17   and profitability (such as crop yields, soil health,  
18   and other risk-reducing factors);

19           “(2) to support the measurement and quan-  
20   tification of ecosystem services provided by working  
21   land, such as carbon sequestration, water filtration,  
22   and habitat, that result from covered conservation  
23   practices and other production practices; and

24           “(3) to improve the implementation of Depart-  
25   ment programs to optimize productivity, profit-  
26   ability, and ecological benefits.

1 “(b) DEFINITIONS.—In this section:

2 “(1) COVERED CONSERVATION PRACTICE.—The  
3 term ‘covered conservation practice’ means a specific  
4 conservation practice or enhancement that is de-  
5 signed to protect soil health, farm and ranch produc-  
6 tivity, or both (including the protection of wildlife  
7 habitat) while maintaining or enhancing crop yields  
8 in an economically sustainable manner (including  
9 such a conservation practice or enhancement that is  
10 supported by the Department or used independently  
11 by a producer), as determined by the Secretary.

12 “(2) DEPARTMENT.—The term ‘Department’  
13 means the Department of Agriculture.

14 “(3) OTHER PRODUCTION PRACTICE.—The  
15 term ‘other production practice’ means a practice  
16 used to produce a crop or livestock, including pest  
17 control, nutrient management, manure management,  
18 water and irrigation management, seed, feed and nu-  
19 trition, and crop residue management.

20 “(c) DATA COLLECTION, REVIEW, ANALYSIS, AND  
21 TECHNICAL ASSISTANCE.—The Secretary, acting through  
22 the 1 or more applicable Under Secretaries that head mis-  
23 sion areas relating to farm and ranch productivity and  
24 conservation, in coordination with the Chief Data Officer  
25 of the Department, the Chief Economist, and the Under

1 Secretary for Research, Education, and Economics, shall  
2 carry out the following activities:

3           “(1) Identify in the data inventory maintained  
4       by the Secretary under section 3511 of title 44,  
5       United States Code, data relating to the impacts of  
6       covered conservation practices and other production  
7       practices on enhancing crop yields, soil health, and  
8       ecosystem services, reducing risk, and improving  
9       farm, ranch, and other working land profitability  
10      generated or collected by the Department, including  
11      the Farm Service Agency, the Risk Management  
12      Agency, the Natural Resources Conservation Service,  
13      the National Agricultural Statistics Service, the Eco-  
14      nomic Research Service, the Forest Service, and any  
15      other relevant agency, as determined by the Sec-  
16      retary.

17           “(2) Collect or acquire, using other authorities  
18      of the Secretary, and using technology and a mod-  
19      ernized survey system, to the greatest extent prac-  
20      ticable, or another appropriate method, any addi-  
21      tional producer data, baseline data, or other data re-  
22      lating to the impacts of covered conservation prac-  
23      tices and other production practices on enhancing  
24      crop yields, soil health, and ecosystem services, re-  
25      ducing risk, and improving farm, ranch, and other

1        working land profitability necessary to achieve the  
2        purpose described in subsection (a), ensuring that  
3        data is collected from all types and sizes of oper-  
4        ations.

5            “(3) Ensure that producer data identified or  
6        collected under paragraph (1) or (2) are collected in  
7        a compatible format that is machine-readable (as de-  
8        fined in section 3502 of title 44, United States  
9        Code) at the field- and farm-level and in a manner  
10       that places the lowest practicable burden on pro-  
11       ducers and improves the interoperability of the data  
12       collected by the Department for the purposes of this  
13       section and optimizes the interoperability, to the ex-  
14       tent practicable, with data relating to conservation  
15       practices generated by other organizations and other  
16       activities of the Department.

17           “(4) Establish procedures for producers to vol-  
18       untarily provide supplemental data that may be use-  
19       ful in statistical activities (as defined in section 311  
20       of title 5, United States Code) and activities to build  
21       evidence (as defined in that section) of the impacts  
22       of covered conservation practices on—

23            “(A) enhancing crop yields, soil health,  
24       and ecosystem services;

25            “(B) reducing risk; and

1                   “(C) improving farm, ranch, and other  
2                   working land profitability.

3                   “(5) Integrate, collate, and link, to the greatest  
4                   extent practicable, data identified or collected under  
5                   this subsection with other government or nongovern-  
6                   mental data sources that include crop yields, soil  
7                   health, covered conservation practices, and other  
8                   production practices.

9                   “(6) Establish a conservation and farm produc-  
10                  tivity secure data center designed to carry out the  
11                  purposes of this section that ensures the security,  
12                  privacy, and integrity of data.

13                  “(7) Make available data through the secure  
14                  data center established under paragraph (6) to aca-  
15                  demic institutions and researchers that meet the  
16                  user permission requirements described in subsection  
17                  (d)(2)(A) for the provision of technical assistance.

18                  “(8) Analyze, consistent with the scientific in-  
19                  tegrity policy of the Department, the data identified  
20                  or collected under this subsection to consider the im-  
21                  pacts of covered conservation practices and other  
22                  production practices on enhancing crop yields, soil  
23                  health, and ecosystem services and improving farm,  
24                  ranch, and other working land profitability.

1           “(9) Use the results of the analyses under para-  
2           graph (8) to improve the implementation of Depart-  
3           ment programs to increase productivity, profitability,  
4           and ecological benefits of farm, ranch, and other  
5           working land, including relating to issues identified  
6           in the evidence-building plan of the Department re-  
7           quired under section 312 of title 5, United States  
8           Code.

9           “(10) Promptly make available on the public-  
10          facing component of the secure data center estab-  
11          lished under paragraph (6) the research, analysis,  
12          evaluation products, and other information gen-  
13          erated in carrying out this section (including open  
14          Government data assets (as defined in section 3502  
15          of title 44, United States Code), to the extent per-  
16          missible by law)—

17               “(A) that demonstrates the impacts of cov-  
18               ered conservation practices and other produc-  
19               tion practices on enhancing crop yields, soil  
20               health, and ecosystem services, reducing risk,  
21               and improving farm, ranch, and other working  
22               land profitability; and

23               “(B) in a manner that is easily accessed by  
24               producers, researchers, and other stakeholders.

1       “(d) SECURE AGRICULTURAL DATA CENTER ESTAB-  
2 LISHMENT.—

3               “(1) IN GENERAL.—The Secretary may enter  
4 into 1 or more agreements with 1 or more academic  
5 institutions, organizations, government agencies, or  
6 other experts determined necessary by the Secretary  
7 to provide technical assistance, expertise, and tech-  
8 nology infrastructure, as needed, to develop the se-  
9 cure data center under subsection (c)(6).

10              “(2) REQUIREMENT TO MODERNIZE DATA SE-  
11 CURITY, STORAGE, AND ACCESS.—

12                      “(A) IN GENERAL.—In establishing the se-  
13 cure data center described in paragraph (1), the  
14 Secretary shall use industry-standard data se-  
15 curity protocols and user permissions to protect  
16 the security and confidentiality of proprietary  
17 producer data while automating and standard-  
18 izing data collection, storage, and sharing, to  
19 the greatest extent practicable, for the purpose  
20 of carrying out this section and encouraging ag-  
21 riculture innovation.

22                      “(B) ADDITIONAL REQUIREMENTS.—In  
23 carrying out subparagraph (A), the Secretary  
24 shall establish procedures for the operation and  
25 use of the secure data center that includes—



1 “(i) prohibiting the sale of any indi-  
2 vidual or identifiable producer data;

3 “(ii) requiring any published research  
4 to release only aggregated data, consistent  
5 with best practices for disclosure avoidance  
6 and reducing the risk of re-identification;  
7 and

8 “(iii) periodically consulting with ex-  
9 perts and stakeholders to consider nec-  
10 essary modifications to security protocols  
11 or confidentiality protections for identifi-  
12 able data accessed or maintained by the se-  
13 cure data center and improvements to ac-  
14 cess for approved users.

15 “(e) PRODUCER TOOLS.—

16 “(1) IN GENERAL.—Not later than 3 years  
17 after the date of enactment of this section, the Sec-  
18 retary shall provide technical assistance, including  
19 through internet-based tools, based on the analysis  
20 conducted in carrying out this section and other  
21 sources of relevant data, to assist producers in im-  
22 proving sustainable production practices that in-  
23 crease yields and enhance environmental outcomes.

1           “(2) INTERNET-BASED TOOLS.—Internet-based  
2           tools described in paragraph (1) shall provide to pro-  
3           ducers, to the greatest extent practicable—

4                   “(A) confidential data specific to each  
5                   farm or ranch of the producer; and

6                   “(B) general data relating to the impacts  
7                   of covered conservation practices on enhancing  
8                   crop yields, soil health, and otherwise reducing  
9                   risk and improving farm and ranch profit-  
10                  ability.

11          “(f) EFFECT ON PRIVACY PROTECTION LAWS.—  
12          Nothing in this section affects the applicability to this sec-  
13          tion of—

14                  “(1) section 1770;

15                  “(2) section 1619 of the Food, Conservation,  
16                  and Energy Act of 2008 (7 U.S.C. 8791);

17                  “(3) section 502(c) of the Federal Crop Insur-  
18                  ance Act (7 U.S.C. 1502(c));

19                  “(4) section 552a of title 5, United States  
20                  Code; or

21                  “(5) any other applicable privacy law that pro-  
22                  tects personally identifiable information of pro-  
23                  ducers.

24          “(g) REPORTING.—Not later than 1 year after the  
25          date of enactment of this section, and each year there-

1 after, the Secretary shall submit to the Committee on Ag-  
2 riculture, Nutrition, and Forestry of the Senate and the  
3 Committee on Agriculture of the House of Representatives  
4 a report that includes—

5 “(1) a summary of the analysis conducted  
6 under this section;

7 “(2) the number and regions of producers that  
8 voluntarily provided data under subsection (c)(4);

9 “(3) a description of any additional or new ac-  
10 tivities planned to be conducted under this section in  
11 the next fiscal year, including—

12 “(A) research relating to any additional  
13 conservation practices;

14 “(B) any new types of data to be collected;

15 “(C) any improved or streamlined data col-  
16 lection efforts associated with this section; and

17 “(D) any new research projects; and

18 “(4) in the case of the first 2 reports submitted  
19 under this subsection, a description of the current  
20 status of the implementation of activities under sub-  
21 section (c).

22 “(h) FUNDING AND ADMINISTRATION.—The Sec-  
23 retary shall use the existing funds and authorities of the  
24 Department to carry out this section.

- 1       “(i) EFFECT.—Nothing in this section authorizes the  
2 Secretary to compel a producer—  
3           “(1) to provide data to the Department; or  
4           “(2) to receive technical assistance.”.